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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

MEMORANDUM

Date: February 22, 2000

To: Candy Morin, Project Manager, Chris Perzan, DLC

From: Rob Watson, RCRA/CERCLA Coordinator

Subject: Administrative Order by Consent (V-W-99-C-554) for the removal of sediments from Dead Creek and Site M and the construction of an on-site landfill.

1631210001 -- St. Clair County
Sauget Area 1 - Dead Creek, Site M
Superfund/Technical File

In response to your February 14, 2000 e-mail, I have reviewed the Administrative Order by Consent (V-W-99-C-554) for the removal of sediments from Dead Creek and Site M and the placement of these sediments in an on-site landfill. I reviewed the AOC to determine if the proposed removal action will comply with ARARs. A technical review was not performed.

1. It is my understanding that the Time Critical Removal Action described in the AOC is designed to address the immediate threats to human health and the environment, and not intended to be the final remedy for the contamination under and around Dead Creek. In order to discourage possible future arguments regarding the permanence of this removal action, the AOC should include wording which explicitly states this removal action is not considered to be the final remedy for the contamination under and along Dead Creek and Site M.

2. 2. Non-Native Materials Handling, Dewatering, and Treatment Requirements (page 14): The dewatering and/or solidification of this material should take place prior to placing it in the containment cell. 35 IAC 724.414 (40 CFR 264.314) prohibits the placement of hazardous waste containing free liquids in landfills. This regulation also requires sorbents used to treat liquid wastes to be nonbiodegradable. A similar prohibition against liquids in nonhazardous landfills is found at 35 IAC 811.107(m).

Sec 33

5. The ASTM or SW-846 test method should be referenced whenever the AOC references a particular test or requires a specific test result be obtained.

4. 4. Excavated Area Soil Sampling Requirements (page 14): As it is currently written, the soils in the excavated areas will only be analyzed by the SPLP test. The soil samples collected from all excavated areas should also be analyzed to determine the total concentrations of all constituents of concern, and the TCLP concentrations of all parameters identified at 35 IAC 721.124. There are several reasons for requiring total and TCLP analysis of these soils:

a. All the information which USEPA & IEPA could reasonably be expected to need to manage the soils under and along Dead Creek (such as nature and extent of contamination, and regulatory classification) should be collected now, during the removal action, when we have the opportunity. Once the HDPE liner is in place, sampling of the soils under Dead Creek will be difficult for a number of reasons.

b. The total concentrations of the contaminants of concern are utilized to characterize the nature and extent of contamination at a site and to develop Preliminary Remediation Goals and Remedial Action Objectives.

c. Determining if a waste, or contaminated media, exhibits a characteristic of a hazardous waste is part of information required during an RI/FS in order to determine the ARARs for the remedial action. Of particular concern in this case are the RCRA closure and post-closure requirements. If the soils under, or along, Dead Creek exhibit a characteristic of a hazardous waste, and will be left in place, the RCRA closure and post-closure requirements would be considered both relevant and appropriate and therefore ARARs. Similarly, the removal of all material which exhibits a characteristic of a hazardous waste could be considered as a remedial action objective. As noted earlier, once the HDPE bottom liner is installed in Dead Creek, it is highly unlikely that the soils under Dead Creek will be able to be sampled.

d. The total and TCLP concentrations of the soils will be needed for the FS to calculate and evaluate the treatment and disposal costs of any future remedial action for the soils under and along Dead Creek.

e. The SPLP concentrations would be expected to be lower (in some cases significantly lower) than the total or TCLP concentrations of the contaminants of concern in the soil. This could give the wrong perception of the level of contamination in the soils under and along Dead Creek.

5. 5. Excavated Areas Sampling and Bottom Liner Requirements: Compatibility tests should be performed on the HDPE liner using the contaminants in the soils under and along Dead Creek. This is necessary in order to insure that the contaminants remaining in the soils under the liner will not damage or deteriorate the liner while it is in place.

6. 5. Excavated Areas Sampling and Bottom Liner Requirements: The AOC should specify that the Time Critical Removal Work Plan will identify and address the hydrostatic and hydrodynamic forces which will act on the bottom liner when it is placed in Dead Creek. More specifically, the bottom liner needs to be constructed and installed such that the (worst case) hydraulic forces exerted by the groundwater and surface water do not damage or otherwise impair the effectiveness of the liner during the time it is temporarily in place.

7. 6. Containment Cell Design Report Requirement: The section of the AOC which specifies the contents of the Design Report needs to be revised to include the following items:

a. This section should specify the unit will be meet the requirements of 35 IAC 724.401, not just the RCRA minimum technology requirements. In particular, the design of the landfill needs to address the conditions under the unit. What are the soil types, and are wastes present under the proposed location? The materials (foundation soils) under the unit need to be evaluated in order to determine the consolidation of the soils and differential settlement the unit will experience. Once determined, these issues need to be addressed in the design of the unit.

b. Construction of the unit in accordance with the Construction Quality Assurance (CQA) Program requirements at 35 IAC 724.119.

c. A Waste Analysis Plan (WAP) to address the following issues:

i. The compatibility of the materials in the liner, leachate collection and cover systems (HDPE liners, Bentomat, geosynthetics, gravel, etc.) with the wastes which will be placed in the landfill. Compatibility tests need to be performed to insure the contaminants in the sediments will not damage or deteriorate the materials used to construct the landfill.

ii. Procedures (sampling methods and frequencies) performed on the wastes before they are placed in the landfill to insure wastes placed in the cell do not contain free liquids.

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iii. The total concentrations of the contaminants in the sediments need to be identified so that the groundwater monitoring program can be designed to look for these parameters.

NO iv. The Land Disposal Restrictions (LDRs). The document does not include any discussion of these requirements.

d. The design of the cover system (identify the individual layers, settlement, and slope stability) for the containment cell which demonstrates the cover system will meet the requirements at 35 IAC 724.410.

e. Specify the groundwater monitoring program for the containment cell will meet the requirements of 35 IAC 724 Subpart F.

f. Specify that the containment cell will meet the RCRA closure and post-closure requirements at 35 IAC 724.410 and 724 Subpart G.

8. 8. Record Keeping and Closure / Post-Closure Requirements : This section should also reference the closure and post-closure requirements at 35 IAC 724 Subpart G. In addition, it should clearly refer to the requirements to submit a survey plat of the unit to the local land use authorities as required by 35 IAC 724.216, and attach a notice to the deed which meets the requirements at 35 IAC 724.219.

9. 3.5 Final Report (page 19): The Final Report should include the documentation that the closure and post-closure notifications required by 35 IAC 724 Subpart G have been met.

10. 5. Record Retention (page 20): This section needs to be revised to state that records from inspections, O & M, and groundwater monitoring will be retained for the entirety of the 30 year post-closure monitoring period.

11. 8. Emergency Response and Notification of Release (page 21): The wording in this section should be revised to include a release or potential release from the landfill. This is necessary because by definition in Section I, the landfill is not part of the "site" in this Order. Alternatively, perhaps the definition of "Site" in Section I should be revised to include the landfill.